U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 97-134

U.S. GEOLOGICAL SURVEY
COAL QUALITY (COALQUAL) DATABASE: VERSION 2.0

DISCLAIMER

This CD-ROM was prepared by the U.S. Geological Survey (USGS), an agency of the U.S. Department of the Interior. The COALQUAL database is considered provisional and contains documentation of the origin of the data, data collection methods employed, and description of data elements. The database has received rigorous review and is substantially complete and accurate. Further documentation review of the geologic descriptions are necessary before the designation of Director's Approved data can be obtained.

These data and the software on this CD-ROM disc are released on condition that neither the USGS nor the U.S. Government may be held liable for any damages resulting from their use.

THE USGS MAKES NO CLAIMS AS TO THE ACCURACY OF APPARENT COAL RANK CALCULATED FROM PARAMETERS OF PROXIMATE AND ULTIMATE ANALYSES. (For some samples calculated rank may be higher due to air-drying of samples before analysis.)

All ASTM data are reported to two decimal places unless otherwise noted (**SEE TECHINFO.PDF**). The standard analyses, American Society for Testing and Materials (ASTM) data are provided on an as-received basis, whereas USGS data are provided on a remnant-moisture basis (using USGS test methods, moisture contents of samples were not adequately determined prior to analysis. Therefore some samples, particularly low-rank coal samples, contained significant amounts of unmeasured moisture which would manifest an effect by reducing the amount of ash, trace- major-, and minor- elements.).

All ASTM data are reported to two decimal places unless otherwise noted (**SEE TECHINFO.PDF**).

ALL USGS ANALYTICAL DATA ARE REPORTED TO TWO SIGNIFICANT FIGURES, EXCEPT FOR GSASH WHICH IS REPORTED TO 1 DECIMAL PLACE EVEN THOUGH THE VALUES ARE SHOWN TO THREE DECIMAL PLACES IN THE DATABASE TO MEET CONDITIONS OF THE SOFTWARE TO PROPERLY PLACE THE DECIMAL POINT.

All elemental data (data fields are labeled by the two letter symbol for the element and have a suffix of _E such as AS_E, which represents elemental arsenic) are reported in parts-per-million (ppm). (SEE TECHINFO.PDF FOR OTHER DATA FIELDS)

Qualified data are included in the database in the following manner: greater than values have been treated as the value, reported less than values have been treated by multiplying the reported less than value by 0.7 (SEE CONNOR, 1976 in REFERENC.PDF) and dropping the qualifier, and NULL values (represented by -0 in the database) represent zero values which were qualified. (Qualified zero values are obtained when a sample was not analyzed for an element (no data available), when the element had interference in its analysis, or when an element was not detected during an analysis.) The percentage of qualified values for each element was calculated using the original as-received/as-determined database (USCHEM). This percentage calculation did not include qualifiers which resulted in NULL values. See each element in TECHINFO.PDF or in the HELP files in Landview III™ Query option.

Data for elements having more than 25 percent qualified values (Au, Bi, Cd, Cl, Dy, Er, Gd, Ge, Ho, In, Ir, Nd, Os, Pd, Pr, Pt, Rb, Re, Rh, Ru, Sn, Te, Tl, and Tm) should not be used comparison

purposes (statistical or otherwise) and elements with 10 to 25 percent qualified values (Ashdef, Ashsof, Ashfld, Slfate, Slfpyr, Slforg, P_2O_5, Ag, Ce, Hf, La, Lu, Nb, P, Ta, Tb, and W) should be used with EXTREME caution for statistical comparison purposes. There is no easy way to separate the qualified values from the non-qualified values in this database. The database structure will be revised in the next version of this CD to resolve this problem. If working with these elements, please contact the authors (See CONTACTS.PDF) to obtain the original qualified data.